

Title (en)

A process for preparing nicotinonitriles and intermediates used therein.

Title (de)

Verfahren zur Herstellung von Nicotinnitrilen und dabei verwendete Zwischenprodukte.

Title (fr)

Procédé pour la préparation de nicotinonitriles et produits intermédiaires utilisés dans ce procédé.

Publication

**EP 0095152 A1 19831130 (EN)**

Application

**EP 83104984 A 19830519**

Priority

- US 38106282 A 19820524
- US 38116282 A 19820524
- US 47196183 A 19830303

Abstract (en)

One aspect of the invention resides in the three step process for preparing cardiotonically active 1,2-dihydro-6-(lower-alkyl)-2-oxo-5-(pyridinyl)nicotinonitriles or 1,2-dihydro-6-(lower-alkyl)-2-oxo-5-(pyridinyl)nicotinamides which comprises reacting a pyridinylmethyl lower-alkyl ketone with tri-(lower-alkyl) orthoformate, acetic anhydride and acetic acid to produce 2-(lower-alkoxy)-1-(pyridinyl)ethenyl lower-alkyl ketone reacting the latter with cyanoacetamide or malonamide in the presence of a basic condensing agent and neutralizing the reaction mixture, where pyridinyl is 4- or 3-pyridinyl or 4- or 3-pyridinyl having one or two lower-alkyl substituents. Other aspects of the invention reside in the intermediate 2-(lower-alkoxy)-1-(pyridinyl)ethenyl lower-alkyl ketones, their salts and their two step conversion, as described above, to 1,2-dihydro-6-(lower-alkyl)-2-oxo-5-(pyridinyl)nicotinonitriles or corresponding nicotinamides.

IPC 1-7

**C07D 213/50**; **C07D 213/85**; **C07D 213/82**

IPC 8 full level

**C07D 211/02** (2006.01); **C07D 213/50** (2006.01); **C07D 213/82** (2006.01); **C07D 213/85** (2006.01); **C07D 401/04** (2006.01)

CPC (source: EP KR)

**C07D 213/50** (2013.01 - EP); **C07D 213/82** (2013.01 - EP); **C07D 213/85** (2013.01 - EP); **C07D 401/04** (2013.01 - KR)

Citation (search report)

- US 4262000 A 19810414 - HOLMWOOD GRAHAM, et al
- US 4137233 A 19790130 - LESHER GEORGE Y, et al
- GB 2070008 A 19810903 - STERLING DRUG INC
- US 4347363 A 19820831 - SINGH BALDEV
- US 4313951 A 19820202 - LESHER GEORGE Y, et al
- US 4223149 A 19800916 - OPALKA JR CHESTER J, et al
- US 4276293 A 19810630 - LESHER GEORGE Y, et al
- US 2824121 A 19580218 - LEONARD NICHOLL, et al

Cited by

US4976774A; CN111377858A

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI NL SE

DOCDB simple family (publication)

**EP 0095152 A1 19831130**; **EP 0095152 B1 19861022**; AU 1442383 A 19831201; AU 559149 B2 19870226; DE 3367091 D1 19861127; DK 157488 B 19900115; DK 157488 C 19900611; DK 224283 A 19831125; DK 224283 D0 19830519; ES 522506 A0 19850801; ES 535990 A0 19851016; ES 8506693 A1 19850801; ES 8601132 A1 19851016; FI 80021 B 19891229; FI 80021 C 19900410; FI 831730 A0 19830517; FI 831730 L 19831125; GR 78573 B 19840927; HK 79591 A 19911018; IE 55135 B1 19900606; IE 831155 L 19831124; IL 68671 A0 19830930; IL 68671 A 19860731; KR 850001191 A 19850316; KR 880002354 B1 19881029; KR 890001543 B1 19890508; NO 163008 B 19891211; NO 163008 C 19900321; NO 831638 L 19831125; NZ 204175 A 19851213; PT 76710 A 19830601; PT 76710 B 19851227

DOCDB simple family (application)

**EP 83104984 A 19830519**; AU 1442383 A 19830510; DE 3367091 T 19830519; DK 224283 A 19830519; ES 522506 A 19830518; ES 535990 A 19840917; FI 831730 A 19830517; GR 830171382 A 19830518; HK 79591 A 19911010; IE 115583 A 19830517; IL 6867183 A 19830512; KR 830002192 A 19830518; KR 8302192 D 19830518; NO 831638 A 19830509; NZ 20417583 A 19830509; PT 7671083 A 19830517